USGS

# WATER RESOURCES RESEARCH GRANT PROPOSAL

**Project ID:** 2003TX97B

**Title:** Groundwater Data Modeling for Arc Hydro

**Project Type:** Research

**Focus Categories:** Groundwater, Models, Methods

**Keywords:** groundwater, data model, GIS, ArcGIS, Arc Hydro, modeling

**Start Date:** 03/01/2003

**End Date:** 02/28/2004

**Federal Funds Requested:** $4182.00

**Matching Funds:** $10000.00

**Congressional District:** 10

**Principal Investigators:** Strassberg, Gil (UT); Maidment, David R.

**Abstract:** The ArcHydro computer model is a newly developed method to gather, store, and assess water resources data using geographic information systems and advanced computer models. So far, most of the work done to test and improve ArcHydro has focused on surface water resources. This project will focus on developing an ArcGIS data for groundwater as part of ArcHydro. The goal is to create a complex data model that describes the groundwater environment and how water flows within complex aquifers in three dimensions. Tasks associated with this study include identifying key features that need to be included in the ArcHydro groundwater model (for example, aquifer formations and water tables), creating three-dimensional objects that properly represent components of groundwater systems that can be used in the modeling, and designing the code framework for the ArcGIS program. The models will b e evaluated and tested by comparing simulated results to U.S. Geological Survey data. Ultimately, this project will contribute to the development of a full-fledged groundwater modeling component of the Arc GIS system.

*U.S. Department of the Interior*, *U.S. Geological Survey*
*Maintain: Schefter@usgs.gov*
*Last Modified: Wed June 11, 2003 4:22 PM*
*Privacy Statement* || *Disclaimer* || *Accessibility*